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in the following listed application(s) or patent(s) for which the issue fee has been paid.

<u>Patent No.</u>	<u>Serial No.</u>	<u>Patent Date</u>	<u>US 371 Filing Date</u>	<u>Confirmation No.</u>	<u>Attorney Docket No.</u>
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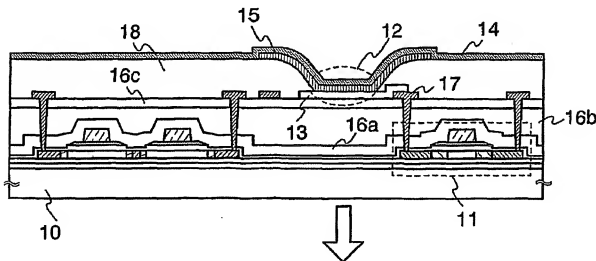
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**(12) United States Patent**  
**Ikeda et al.****(10) Patent No.: US 7,569,988 B2**  
**(45) Date of Patent: Aug. 4, 2009****(54) LIGHT EMITTING ELEMENT AND DISPLAY DEVICE USING THE SAME****(56)****References Cited****U.S. PATENT DOCUMENTS**6,013,384 A 1/2000 Kido et al. .... 428/690  
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*Primary Examiner*—Vip Patel*(74) Attorney, Agent, or Firm*—Cook Alex Ltd.**(57)****ABSTRACT**

An object of the invention is to provide a highly reliable light emitting element with low drive voltage and longer life than a conventional light emitting element, and a display device using the light emitting element. A light emitting element according to the invention comprises a plurality of layers which is interposed between a pair of electrodes, in which at least one of the plurality of layers is formed of a layer containing a light emitting material, and the layer containing a light emitting material is interposed between a layer containing an oxide semiconductor and/or metal oxide and a material having a higher hole transporting property than an electron transporting property, and a layer containing an oxide semiconductor and/or metal oxide, a material having a higher electron transporting property than a hole transporting property and a material which can donate electrons to the material having a higher electron transporting property than a hole transporting property.

**28 Claims, 13 Drawing Sheets****(\*) Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 165 days.**(21) Appl. No.: 10/579,691****(22) PCT Filed: Sep. 26, 2005****(86) PCT No.: PCT/JP2005/018215**§ 371 (c)(1),  
(2), (4) Date: **May 18, 2006****(87) PCT Pub. No.: WO2006/035952****PCT Pub. Date: Apr. 6, 2006****(65) Prior Publication Data****US 2007/0159082 A1 Jul. 12, 2007****(30) Foreign Application Priority Data****Sep. 30, 2004 (JP) ..... 2004-288408****(51) Int. Cl. H01J 1/62 (2006.01)****(52) U.S. Cl. .... 313/506; 313/504; 313/512****(58) Field of Classification Search .... 313/503, 313/504, 506, 512****See application file for complete search history.**